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www.alsglobal.com

LABORATORY REPORT

October 30, 2015

Andy Limmer
Weaver Boos Consultants
1604 Eastport Plaza Drive, Suite 104
Collinsville, IL 62234

RE: WM-Cottonwood Hills RDF Flare Gas Sample / 0086-

Dear Andy:

Enclosed are the results of the samples submitted to our laboratory on October 26, 2015. For your reference, these analyses have been assigned our service request number P1504534.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

Kate Aguilera

By Kate Aguilera at 7:23 am, Oct 30, 2015

For Sue Anderson
Project Manager

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Client: Weaver Boos Consultants Service Request No: P1504534
Project: WM-Cottonwood Hills RDF Flare Gas Sample / 0086-

CASE NARRATIVE

The samples were received intact under chain of custody on October 26, 2015 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Sulfur Analysis

The samples were analyzed for twenty sulfur compounds per ASTM D 5504-12 using a gas chromatograph equipped with a sulfur chemiluminescence detector (SCD). All compounds with the exception of hydrogen sulfide and carbonyl sulfide are quantitated against the initial calibration curve for methyl mercaptan. This method is included on the laboratory's NELAP scope of accreditation, however it is not part of the DoD-ELAP or AIHA-LAP accreditation.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

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ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
AIHA	http://www.aihaaccreditedlabs.org	101661
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0694
DoD ELAP	http://www.pjlabs.com/search-accredited-labs	L14-2-R1
Florida DOH (NELAP)	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E871020
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm	2014025
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	876241
New Jersey DEP (NELAP)	http://www.nj.gov/dep/oqa/	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-001
Pennsylvania DEP	http://www.depweb.state.pa.us/labs	68-03307 (Registration)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704413-15-6
Utah DOH (NELAP)	http://www.health.utah.gov/lab/labimp/certification/index.html	CA016272015-5
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: Weaver Boos Consultants
Service Request: P1504534
Project ID: WM-Cottonwood Hills RDF Flare Gas Sample / 0086-

Date Received: 10/26/2015
Time Received: 09:30

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pfl (psig)	ASTM D 5504-12 - Sulfur Can
CWH-4	P1504534-001	Air	10/21/2015	09:48	SC02008	-1.77	3.87	X
CWH-5	P1504534-002	Air	10/21/2015	10:08	SSC00247	-2.35	4.04	X
CWH-6	P1504534-003	Air	10/21/2015	10:25	SSC00145	-2.15	3.62	X

Air - Chain of Custody Record & Analytical Service Request

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Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10-Day-Standard

ALS Project No: P1504534

Company Name & Address (Reporting Information)
Weaver Consultants Group
1604 Eastport Plaza Dr.
Collinsville, IL 62234

Project Name: WM- Cottonwood Hills RDF Flare Gas Sample

Project Number: 0086 -

Project Manager: Andy Limmer

P.O. # / Billing Information

Phone: 618-830-1317

Fax:

Email Address for Result Reporting: alimmer@wcgrp.com

Sampler (Print & Sign)

ALS Contact: Sue Anderson

Analysis Method: ASTM D5504-12 H2S+Sulfur

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	Comments e.g. Actual Preservative or specific instructions
CWH-4	1	10/21/15	948	SC02008	SOA00115	-8.4	UNK	6L	
CWH-5	2	10/21/15	1008	SSC00247	SOA00048	-8.4	UNK	6L	
CWH-6	3	10/21/15	1026	SSC00145	SOA00170	-8.4	UNK	6L	

Report Tier Levels - please select

Tier I - Results (Default if not specified) _____ Tier III (Results + QC & Calibration Summaries) _____

Tier II (Results + QC Summaries _____ Tier IV (Date Validation Package) 10% Surcharge _____

EDD required YES / No

Type: _____ Units: _____

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
[signature]	10/21/15	4:00	FEDEX		
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
FEDEX			[signature]	10/26/15	0930

Cooler / Blank Temperature _____ °C

5 of 16

WM01152

ALS Environmental

Sample Acceptance Check Form

Client: Weaver Boos Consultants Work order: P1504534

Project: WM-Cottonwood Hills RDF Gas Sample / 0086-

Sample(s) received on: 10/26/15 Date opened: 10/26/15 by: ADAVID

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
8	Were **custody seals** on outside of cooler/Box/Container?	☒	☐	☐
	Location of seal(s)? Top of box sealing. Sealing Lid?	☒	☐	☐
	Were signature and date included?	☐	☒	☐
	Were seals intact?	☒	☐	☐
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☐	☐	☒
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1504534-001.01	6.0 L Source Can					
P1504534-002.01	6.0 L Silonite Can					
P1504534-003.01	6.0 L Silonite Can					

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Weaver Boos Consultants**
Client Sample ID: **CWH-4** ALS Project ID: P1504534
Client Project ID: **WM-Cottonwood Hills RDF Flare Gas Sample / 0086-** ALS Sample ID: P1504534-001

Test Code:	ASTM D 5504-12	Date Collected:	10/21/15
Instrument ID:	Agilent 6890A/GC13/SCD	Time Collected:	09:48
Analyst:	Mike Conejo	Date Received:	10/26/15
Sample Type:	6.0 L Summa Canister	Date Analyzed:	10/27/15
Test Notes:		Time Analyzed:	16:55
Container ID:	SC02008	Volume(s) Analyzed:	0.050 ml(s)

Canister Dilution Factor: 2.76

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
7783-06-4	Hydrogen Sulfide	**290,000**	380	**210,000**	280	
463-58-1	Carbonyl Sulfide	**2,600**	680	**1,000**	280	
74-93-1	Methyl Mercaptan	**7,500**	540	**3,800**	280	
75-08-1	Ethyl Mercaptan	ND	700	ND	280	
75-18-3	Dimethyl Sulfide	**12,000**	700	**4,800**	280	
75-15-0	Carbon Disulfide	**1,300**	430	**430**	140	
75-33-2	Isopropyl Mercaptan	**4,800**	860	**1,500**	280	
75-66-1	tert-Butyl Mercaptan	ND	1,000	ND	280	
107-03-9	n-Propyl Mercaptan	ND	860	ND	280	
624-89-5	Ethyl Methyl Sulfide	ND	860	ND	280	
110-02-1	Thiophene	**4,100**	950	**1,200**	280	
513-44-0	Isobutyl Mercaptan	ND	1,000	ND	280	
352-93-2	Diethyl Sulfide	ND	1,000	ND	280	
109-79-5	n-Butyl Mercaptan	ND	1,000	ND	280	
624-92-0	Dimethyl Disulfide	ND	530	ND	140	
616-44-4	3-Methylthiophene	ND	1,100	ND	280	
110-01-0	Tetrahydrothiophene	ND	990	ND	280	
638-02-8	2,5-Dimethylthiophene	ND	1,300	ND	280	
872-55-9	2-Ethylthiophene	ND	1,300	ND	280	
110-81-6	Diethyl Disulfide	ND	690	ND	140	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Weaver Boos Consultants**
Client Sample ID: **CWH-5** ALS Project ID: P1504534
Client Project ID: **WM-Cottonwood Hills RDF Flare Gas Sample / 0086-** ALS Sample ID: P1504534-002

Test Code:	ASTM D 5504-12	Date Collected:	10/21/15
Instrument ID:	Agilent 6890A/GC13/SCD	Time Collected:	10:08
Analyst:	Mike Conejo	Date Received:	10/26/15
Sample Type:	6.0 L Silonite Canister	Date Analyzed:	10/27/15
Test Notes:		Time Analyzed:	17:24
Container ID:	SSC00247	Volume(s) Analyzed:	0.050 ml(s)

Canister Dilution Factor: 3.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
7783-06-4	Hydrogen Sulfide	**750,000**	420	**540,000**	300	
463-58-1	Carbonyl Sulfide	**3,500**	740	**1,400**	300	
74-93-1	Methyl Mercaptan	**21,000**	590	**11,000**	300	
75-08-1	Ethyl Mercaptan	ND	760	ND	300	
75-18-3	Dimethyl Sulfide	**32,000**	760	**12,000**	300	
75-15-0	Carbon Disulfide	**3,400**	470	**1,100**	150	
75-33-2	Isopropyl Mercaptan	**14,000**	930	**4,600**	300	
75-66-1	tert-Butyl Mercaptan	ND	1,100	ND	300	
107-03-9	n-Propyl Mercaptan	ND	930	ND	300	
624-89-5	Ethyl Methyl Sulfide	ND	930	ND	300	
110-02-1	Thiophene	**12,000**	1,000	**3,400**	300	
513-44-0	Isobutyl Mercaptan	ND	1,100	ND	300	
352-93-2	Diethyl Sulfide	ND	1,100	ND	300	
109-79-5	n-Butyl Mercaptan	ND	1,100	ND	300	
624-92-0	Dimethyl Disulfide	ND	580	ND	150	
616-44-4	3-Methylthiophene	ND	1,200	ND	300	
110-01-0	Tetrahydrothiophene	ND	1,100	ND	300	
638-02-8	2,5-Dimethylthiophene	ND	1,400	ND	300	
872-55-9	2-Ethylthiophene	ND	1,400	ND	300	
110-81-6	Diethyl Disulfide	ND	750	ND	150	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Weaver Boos Consultants**
Client Sample ID: **CWH-6** ALS Project ID: P1504534
Client Project ID: **WM-Cottonwood Hills RDF Flare Gas Sample / 0086-** ALS Sample ID: P1504534-003

Test Code:	ASTM D 5504-12	Date Collected:	10/21/15
Instrument ID:	Agilent 6890A/GC13/SCD	Time Collected:	10:25
Analyst:	Mike Conejo	Date Received:	10/26/15
Sample Type:	6.0 L Silonite Canister	Date Analyzed:	10/28/15
Test Notes:		Time Analyzed:	08:46
Container ID:	SSC00145	Volume(s) Analyzed:	0.10 ml(s)

Canister Dilution Factor: 2.93

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
7783-06-4	Hydrogen Sulfide	**270,000**	200	**190,000**	150	
463-58-1	Carbonyl Sulfide	**1,400**	360	**570**	150	
74-93-1	Methyl Mercaptan	**6,900**	290	**3,500**	150	
75-08-1	Ethyl Mercaptan	ND	370	ND	150	
75-18-3	Dimethyl Sulfide	**13,000**	370	**5,200**	150	
75-15-0	Carbon Disulfide	**1,300**	230	**430**	73	
75-33-2	Isopropyl Mercaptan	**4,500**	460	**1,500**	150	
75-66-1	tert-Butyl Mercaptan	ND	540	ND	150	
107-03-9	n-Propyl Mercaptan	ND	460	ND	150	
624-89-5	Ethyl Methyl Sulfide	ND	460	ND	150	
110-02-1	Thiophene	**4,100**	500	**1,200**	150	
513-44-0	Isobutyl Mercaptan	ND	540	ND	150	
352-93-2	Diethyl Sulfide	ND	540	ND	150	
109-79-5	n-Butyl Mercaptan	ND	540	ND	150	
624-92-0	Dimethyl Disulfide	ND	280	ND	73	
616-44-4	3-Methylthiophene	ND	590	ND	150	
110-01-0	Tetrahydrothiophene	ND	530	ND	150	
638-02-8	2,5-Dimethylthiophene	ND	670	ND	150	
872-55-9	2-Ethylthiophene	ND	670	ND	150	
110-81-6	Diethyl Disulfide	ND	370	ND	73	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Weaver Boos Consultants**
Client Sample ID: **Method Blank** ALS Project ID: P1504534
Client Project ID: **WM-Cottonwood Hills RDF Flare Gas Sample / 0086-** ALS Sample ID: P151027-MB

Test Code: ASTM D 5504-12 Date Collected: NA
Instrument ID: Agilent 6890A/GC13/SCD Time Collected: NA
Analyst: Mike Conejo Date Received: NA
Sample Type: 6.0 L Summa Canister Date Analyzed: 10/27/15
Test Notes: Time Analyzed: 08:11
Volume(s) Analyzed: 1.0 ml(s)

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
7783-06-4	Hydrogen Sulfide	ND	7.0	ND	5.0	
463-58-1	Carbonyl Sulfide	ND	12	ND	5.0	
74-93-1	Methyl Mercaptan	ND	9.8	ND	5.0	
75-08-1	Ethyl Mercaptan	ND	13	ND	5.0	
75-18-3	Dimethyl Sulfide	ND	13	ND	5.0	
75-15-0	Carbon Disulfide	ND	7.8	ND	2.5	
75-33-2	Isopropyl Mercaptan	ND	16	ND	5.0	
75-66-1	tert-Butyl Mercaptan	ND	18	ND	5.0	
107-03-9	n-Propyl Mercaptan	ND	16	ND	5.0	
624-89-5	Ethyl Methyl Sulfide	ND	16	ND	5.0	
110-02-1	Thiophene	ND	17	ND	5.0	
513-44-0	Isobutyl Mercaptan	ND	18	ND	5.0	
352-93-2	Diethyl Sulfide	ND	18	ND	5.0	
109-79-5	n-Butyl Mercaptan	ND	18	ND	5.0	
624-92-0	Dimethyl Disulfide	ND	9.6	ND	2.5	
616-44-4	3-Methylthiophene	ND	20	ND	5.0	
110-01-0	Tetrahydrothiophene	ND	18	ND	5.0	
638-02-8	2,5-Dimethylthiophene	ND	23	ND	5.0	
872-55-9	2-Ethylthiophene	ND	23	ND	5.0	
110-81-6	Diethyl Disulfide	ND	12	ND	2.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Weaver Boos Consultants**
Client Sample ID: **Method Blank** ALS Project ID: P1504534
Client Project ID: **WM-Cottonwood Hills RDF Flare Gas Sample / 0086-** ALS Sample ID: P151028-MB

Test Code: ASTM D 5504-12
Instrument ID: Agilent 6890A/GC13/SCD
Analyst: Mike Conejo
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Time Collected: NA
Date Received: NA
Date Analyzed: 10/28/15
Time Analyzed: 08:04
Volume(s) Analyzed: 1.0 ml(s)

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
7783-06-4	Hydrogen Sulfide	ND	7.0	ND	5.0	
463-58-1	Carbonyl Sulfide	ND	12	ND	5.0	
74-93-1	Methyl Mercaptan	ND	9.8	ND	5.0	
75-08-1	Ethyl Mercaptan	ND	13	ND	5.0	
75-18-3	Dimethyl Sulfide	ND	13	ND	5.0	
75-15-0	Carbon Disulfide	ND	7.8	ND	2.5	
75-33-2	Isopropyl Mercaptan	ND	16	ND	5.0	
75-66-1	tert-Butyl Mercaptan	ND	18	ND	5.0	
107-03-9	n-Propyl Mercaptan	ND	16	ND	5.0	
624-89-5	Ethyl Methyl Sulfide	ND	16	ND	5.0	
110-02-1	Thiophene	ND	17	ND	5.0	
513-44-0	Isobutyl Mercaptan	ND	18	ND	5.0	
352-93-2	Diethyl Sulfide	ND	18	ND	5.0	
109-79-5	n-Butyl Mercaptan	ND	18	ND	5.0	
624-92-0	Dimethyl Disulfide	ND	9.6	ND	2.5	
616-44-4	3-Methylthiophene	ND	20	ND	5.0	
110-01-0	Tetrahydrothiophene	ND	18	ND	5.0	
638-02-8	2,5-Dimethylthiophene	ND	23	ND	5.0	
872-55-9	2-Ethylthiophene	ND	23	ND	5.0	
110-81-6	Diethyl Disulfide	ND	12	ND	2.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Weaver Boos Consultants**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1504534
Client Project ID: **WM-Cottonwood Hills RDF Flare Gas Sample / 0086-** ALS Sample ID: P151027-LCS

Test Code: ASTM D 5504-12 Date Collected: NA
Instrument ID: Agilent 6890A/GC13/SCD Date Received: NA
Analyst: Mike Conejo Date Analyzed: 10/27/15
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: NA ml(s)
Test Notes:

CAS #	Compound	Spike Amount ppbV	Result ppbV	% Recovery	ALS Acceptance Limits	Data Qualifier
7783-06-4	Hydrogen Sulfide	1,990	**2,100**	**106**	65-138	
463-58-1	Carbonyl Sulfide	2,030	**1,880**	**93**	60-135	
74-93-1	Methyl Mercaptan	2,020	**2,030**	**100**	57-140	

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Weaver Boos Consultants**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1504534
Client Project ID: **WM-Cottonwood Hills RDF Flare Gas Sample / 0086-** ALS Sample ID: P151028-LCS

Test Code: ASTM D 5504-12 Date Collected: NA
Instrument ID: Agilent 6890A/GC13/SCD Date Received: NA
Analyst: Mike Conejo Date Analyzed: 10/28/15
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: NA ml(s)
Test Notes:

CAS #	Compound	Spike Amount ppbV	Result ppbV	% Recovery	ALS Acceptance Limits	Data Qualifier
7783-06-4	Hydrogen Sulfide	1,990	**2,090**	**105**	65-138	
463-58-1	Carbonyl Sulfide	2,030	**2,010**	**99**	60-135	
74-93-1	Methyl Mercaptan	2,020	**2,080**	**103**	57-140	

Weaver Consultants Group
LANDFILL GAS FLARE TESTING LOG

Waste Management, Inc.
Cottonwood Hills Recycling and Disposal Facility
Marissa, IL

Sampler	Andy Limmer		
Date	10/21/2015		
Sample I.D.	CWH-4		
Vessel I.D.	SS02008	Flow Controler ID	SOA00115
Vessel Vol.	6.0	liter	

Temperature Measurements

Flare Temp.*	1400	Deg. F
Gas Temp.**	116.8	Deg. F

*Recorded From Flare Chart Recorder
** Measured with in-line thermometer

Pressure Measurement

Static Pressure*	1.4	Inches H20

* Measured with in-line Gauge

Flow Rate Record

Time	958	
Flow Rate*	763	SCFM

*Recorded from continuous flowmeter

Summa Canister Vacuum Readings

Initial Vacuum	-8.4	Inches Hg
Final Vacuum	UNK	Inches Hg

Start Time	948
End Time	1005

Weaver Consultants Group
LANDFILL GAS FLARE TESTING LOG

Waste Management, Inc.
Cottonwood Hills Recycling and Disposal Facility
Marissa, IL

Sampler	Andy Limmer		
Date	10/21/2015		
Sample I.D.	CWH-5		
Vessel I.D.	SSC00247	Flow Controler ID	SOA00048
Vessel Vol.	6.0	liter	

Temperature Measurements

Flare Temp.*	1460	Deg. F
Gas Temp.**	116.8	Deg. F

*Recorded From Flare Chart Recorder
** Measured with in-line thermometer

Pressure Measurement

Static Pressure*	1.4	Inches H20

* Measured with in-line Gauge

Flow Rate Record

Time	1009	
Flow Rate*	761	SCFM

*Recorded from continuous flowmeter

Summa Canister Vacuum Readings

Initial Vacuum	-8.4	Inches Hg
Final Vacuum	UNK	Inches Hg

Start Time	1008
End Time	1023

WM01162

Weaver Consultants Group
LANDFILL GAS FLARE TESTING LOG

Waste Management, Inc.
Cottonwood Hills Recycling and Disposal Facility
Marissa, IL

Sampler	Andy Limmer		
Date	10/21/2015		
Sample I.D.	CWH-6		
Vessel I.D.	SSC00145	Flow Controler ID	SOA00170
Vessel Vol.	6.0	liter	

Temperature Measurements

Flare Temp.*	1352	Deg. F
Gas Temp.**	117.3	Deg. F

*Recorded From Flare Chart Recorder
** Measured with in-line thermometer

Pressure Measurement

Static Pressure*	1.5	Inches H20

* Measured with in-line Gauge

Flow Rate Record

Time	1026	
Flow Rate*	766	SCFM

*Recorded from continuous flowmeter

Summa Canister Vacuum Readings

Initial Vacuum	-8.4	Inches Hg
Final Vacuum	UNK	Inches Hg

Start Time	1025
End Time	1041